

**Principal Investigator Questionnaire  
Survey of Extramural Shared Instrumentation Activities  
National Institutes of Health**

Listed below are your name (as the Principal Investigator\*), institution, department, the Shared Instrumentation Grant (SIG) number, year of grant award, type of instrument(s) funded and the instruments(s) model description(s). Please correct items where information is incorrect.

Corrections

If someone other than the Principal Investigator (the person listed above) completes this questionnaire, please fill in the following information:

Name: \_\_\_\_\_ Title: \_\_\_\_\_

Department: \_\_\_\_\_ Telephone: (\_\_\_\_) \_\_\_\_\_ ext. \_\_\_\_\_

All information you provide will be used for statistical purposes only. The Public Health Service (PHS) assures that your response is entirely voluntary and failure to provide some or all of the information will in no way adversely affect your institution. Where exact data are not available, estimates are acceptable.

This questionnaire should be returned in the enclosed self-addressed stamped envelope by \_\_\_\_\_ as possible is very important.

If you have any questions regarding this survey, please call Ms. Susan Beck at James Bell Associates, 1-800-546-3230.

\*Individual currently responsible for the SIG instrument (may or may not be the individual originally designated as the "Principal Investigator" on the SIG application).

Public reporting burden for this collection of information is estimated to be 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to: PHS Reports Clearance Officer, Rm. 737-F, Humphrey Building, 200 Independence Ave., SW Washington, D.C. 20201, ATTN: PRA; and to Office of Management and Budget, Paperwork Reduction Project (0925-0318), Washington, D.C. 20503. Do not return the completed form to either of these addresses.

To complete the questionnaire, you are encouraged to consult any former PI(s), the instrument operator, if present, and other persons knowledgeable about the instrument.

---

**Topic A: Use of the SIG Instrument**

- 
1. On average, how many hours per week in calendar year 1993 (including weekdays/evening/weekends) was the SIG instrument available for use in conducting research, and, for how many hours was it actually used? This includes the development of instrument use techniques and methods, and time spent training staff involved in conducting the research for which the SIG instrument is used. General student training is **excluded**.

1993 average hours instrument was **available**\* for use per week: \_\_\_\_\_ 9-11/

1993 average hours instrument was actually used per week: \_\_\_\_\_ 12-14/

\*(Available time excludes time when it is not possible to use the instrument because the facility is closed, the instrument is undergoing or awaiting preventative or remedial repair, specially skilled labor needed to operate the instrument is not present, necessary supplies are absent, or any other reason(s) that make the instrument impossible to use for research during a given period.

2. Please identify up to ten **PHS-sponsored** users, each of whom accounted for a significant share of SIG instrument use in 1993. (PHS-sponsored user is defined as an investigator who applies the SIG instrument in PHS-sponsored, peer-reviewed research. The user need not personally operate the SIG instrument). Record the estimated average share of use time in 1993 for each identified PHS-sponsored major user, **including yourself if you are a major user**. (Refer to item 1 above before completing this table and answering items 3b and 4b):

**1993 PHS-sponsored Major Users of the SIG Instrument**

PHS-SPONSORED MAJOR USERS (name, telephone number, address)	ESTIMATED USE: percent of time used
1.	15-17/
2.	18-20/
3.	21-23/
4.	24-26/
5.	27-29/
6.	30-32/
7.	33-35/
8.	36-38/
9.	39-41/
10.	42-44/

- 3a. How many **additional PHS-sponsored** users were there in 1993 (those not listed in the above table)?

\_\_\_\_\_Estimated Number

45-47/

- b. What estimated share of time used in 1993 did these **additional PHS-sponsored** users account for?

\_\_\_\_\_Estimated Percent

48-50/

- 4a. Recognizing that the SIG instrument could be useful to other biological or physical scientists who are not sponsored by PHS, what is the estimated number of **non-PHS-sponsored** users in 1993?

\_\_\_\_\_Estimated Number

51-53/

- b. What estimated share of time used in 1993 did the **non-PHS sponsored** users account for?

\_\_\_\_\_Estimated Percent

54-56/

5. In your opinion, are there researchers in the local biomedical research community who want to use the SIG instrument but who are unable to gain access? (Circle the appropriate number.)

Yes ..... 1 57/  
No ..... 2  
Don't Know ..... 3

Comments: \_\_\_\_\_ 58-59/

\_\_\_\_\_ 60-61/

\_\_\_\_\_ 62-63/

\_\_\_\_\_ 64-65/

6. Sometimes full use of scientific instrumentation is not possible. If the SIG instrument was not fully utilized sometime during 1993, was this because ...  
(Circle all that apply.)

The instrument was broken, or not functioning properly .....	1	66/
The instrument was not reliable (did not provide the required precision and consistency of measurements) .....	2	67/
This instrument was obsolete .....	3	68/
There were not enough investigators who needed to use the instrument .....	4	69/
An operator was needed, but not available .....	5	70/
The instrument was too expensive to use for some investigators	6	71/
There were not enough investigators who were skilled in the application of the instrument .....	7	72/
The instrument was placed in an inconvenient location .....	8	73/
Other .....	9	74/
Please specify: _____		75-76/

- 7a. In your estimation, how has the amount of use of the SIG instrument by **all** users changed since the instrument became operational? (Circle the appropriate number.)

Increased greatly .....	1	77/
Increased somewhat .....	2	
No change .....	3	
Decreased somewhat .....	4	
Decreased greatly .....	5	

- b. What, in your opinion, accounts for any increase or decrease in the amount of SIG instrument use?

_____	78-79/
_____	80-81/
_____	82-83/

- 8a. Has the share of SIG instrument use accounted for by **PHS-sponsored** users changed since the instrument became operational? (Circle the appropriate number.)

Increased greatly .....	1	84/
Increased somewhat .....	2	
No change .....	3	
Decreased somewhat .....	4	
Decreased greatly .....	5	

b.      What, in your opinion, accounts for any increase or decrease in the amount of SIG instrument use by **PHS-sponsored** researchers?

85-86/

87-88/

89-90/

**Topic B: SIG Instrument Operations and Maintenance**

Many SIG instruments require specially trained operators to ensure efficient or optimal utilization. The Principal Investigator is encouraged to work with the "instrument operator", if present, to complete the following questions.

1. When was the SIG instrument first used for **PHS-sponsored** research? If the SIG instrument is a multi-component system, identify the date when the first component supported by this grant was used for PHS-sponsored research.

Month  
91-92/

Year  
93-94/

2. Please identify the source(s) of funds used for acquisition of the SIG instrument. (Specify approximate percentage of contribution from each applicable source.)

Percent

Federal Source

### Percent Non-Federal Source

\_\_\_\_\_ %95-97/

SIG award

\_\_\_\_\_ % 0118-120/

Institution or department

\_\_\_\_\_%98-100/

Other NIH

funds

\_\_\_\_\_%0101-103/

NSF (National Science Foundation)

\_\_\_\_\_%0121-123/

State grant or appropriation

Foundation)

\_\_\_\_\_ %O124-126/

Private or nonprofit foundation

\_\_\_\_\_%<sup>104-106/</sup>

DOD (Department of Defense)

(e.g., Howard

Hughes Medical Institute)

Defense)

\_\_\_\_\_ %O127-129/

Business or industry

\_\_\_\_\_ % 107-109/

DOE (Department of Energy)

\_\_\_\_\_ %O130-132/

Other non-Federal sources

Energy)

Specify:\_\_\_\_\_133-134/

\_\_\_\_\_ %O<sub>110-112</sub>/

USDA (Department of Agriculture)

Agriculture)

%O113-115/

Other Federal sources

Specify:\_\_\_\_\_116-117/

3. Where is the SIG instrument currently located? (Circle all that apply.)

- In an investigator's laboratory or facility ..... 1 135/  
 In a departmental laboratory or facility ..... 2 136/  
 In an interdepartmental laboratory or facility ..... 3 137/  
 In an interinstitutional laboratory or facility ..... 4 138/  
 Other ..... 5 139/

Please specify:

\_\_\_\_\_ 140-141/  
 \_\_\_\_\_ 142-143/  
 \_\_\_\_\_ 144/  
 \_\_\_\_\_

4a. Since the SIG instrument first became operational, has it been significantly modified, e.g., altered or upgraded?

- Yes (Answer 4b) ..... 1 145/  
 No (Go to question 5) ..... 2

b. For each significant modification, please list:

- ! The year modification was completed;  
 ! The approximate cost -- include both labor and non-labor costs as well as any applicable indirect cost; and  
 ! A brief description of the change.

<u>Mod. No.</u>	<u>Year</u>	<u>Approx. Cost</u>	<u>Description of the Change</u>
1	_____146-147/	\$_____148-154/	_____155-156/
2	_____157-158/	\$_____159-165/	_____166-167/
3	_____168-169/	\$_____170-176/	_____177-178/
4	_____179-180/	\$_____181-187/	_____188-189/
5	_____190-191/	\$_____192-198/	_____199-200/

5. Considering the frequency and severity of breakdowns, as well as the required precision and consistency of measurements, how would you rate the SIG instrument's working condition during 1993? (Circle the appropriate number.)



Excellent .....	1	201/
Somewhat above average .....	2	
Average.....	3	
Somewhat below average .....	4	
Poor.....	5	

6a. How much was spent to maintain the SIG instrument during 1993? \$\_\_\_\_\_202-208/

- b. What percent of the maintenance costs were met by each of the following sources of funds during 1993? If none, please enter zero.

	<u>Maintenance</u>	
User Fees	_____ %	209-211
Institution, departmental, or laboratory funds	_____ %	212-214/
Funds allocated from other PHS awards	_____ %	215-217/
Other Federal awards	_____ %	218-220/
Other (please specify): _____	_____ %	221-222/ 223-225/
_____	_____ %	226-227/ 228-230/
_____	_____ %	231-232/ 233-235/
	100 %	

- 7a. Was an instrument operator assigned to the SIG instrument? (Please circle the number that applies.)

Yes (Answer item 7b) ..... 1 236/  
 No (Go to Topic C, item 1) ..... 2

- b. What percent of the SIG instrument operator compensation was met by each of the following sources of funds during 1993? If none, please enter zero.

	<u>Instrument Operator</u> <u>Compensation</u>	
User Fees	_____ %	237-239/
Institution, departmental, or laboratory funds	_____ %	240-242/
Funds allocated from other PHS awards	_____ %	243-245/
Other Federal awards	_____ %	246-248/
Other (please specify): _____	_____ %	249-250/ 251-253/
_____	_____ %	254-255/ 256-258/
_____	_____ %	259-260/ 261-263/
	100 %	

---

### Topic C: SIG Instrument Advisory Committee

---

1. Is there an instrument advisory committee for administration and/or oversight of the SIG instrument? (Please circle the number that applies.)  

Yes (Go to item 2) .....1 264/  
No (Go to Topic D on page 12) .....2
  
2. Which one of the following best describes the SIG instrument advisory committee? (Please circle the number that applies.)  

An advisory committee established solely  
for this SIG instrument .....1 265/  
  
The Biomedical Research Support Grant (BRSG)  
committee (required for PHS BRS Grants) .....2  
  
Some other standing committee (e.g., core facility  
management committee, core research resource committee) .....3
  
3. How many times did the advisory committee meet to discuss the SIG instrument in calendar year 1993?  

\_\_\_\_\_ Number of meetings 266-267/
  
- 4a. What was the size of the advisory committee in 1993?  

\_\_\_\_\_ Number of members 268-269/
  
- b. In 1993, how many members of the SIG instrument advisory committee were: (Please enter the number of committee members in each category; if none, enter zero.)  

\_\_\_\_\_ Members of your laboratory 270-271/  
\_\_\_\_\_ Members of your department, but not your laboratory 272-273/  
\_\_\_\_\_ Members of your institution, but not your department 274-275/  
\_\_\_\_\_ Not members of your institution 276-277/
  
5. How many members of the advisory committee were investigators who used the SIG instrument during 1993?

\_\_\_\_\_ Number of members

278-279/

6. Since the SIG instrument became operational, has the SIG instrument advisory committee established policies or procedures concerning the following matters? (Circle 1 for yes, 2 for no, or 3 for not needed); "not needed" applies when policies and procedures in the area are handled outside the advisory committee or are "not considered necessary".

	YES	NO	NOT NEEDED	
Publicizing the availability of the instrument	1	2	3	280/
Hours the instrument is available for use	1	2	3	281/
Establishment of standards for users (e.g., excluding certain areas of research or types of biological samples)	1	2	3	282/
Selecting among potential users	1	2	3	283/
Procedures for scheduling use of the instrument (e.g., sign-up sheets, user logs)	1	2	3	284/
Maintenance schedule or procedures	1	2	3	285/
Increasing user pool (e.g., outreach to potential users)	1	2	3	286/
Other (Please specify):	1	2	3	289/
_____287-288/	1	2	3	292/
_____290-291/	1	2	3	295/
_____293-294/	1	2	3	298/
_____296-297/	1	2	3	

---

### Topic D: Added Comments

---

1. Please use this space for any additional comments you think would help us to better understand the SIG instrument's use.

	299-300/
	301-302/
	303-304/
	305-306/

2. Please give any suggestions, concerns or comments you or your users have regarding the Shared Instrumentation Grant program (e.g., NIH or PHS policies which discourage potential grantees from applying for an SIG grant; problem with, or resulting from, current policies and procedures; etcetera).

	307-308/
	309-310/
	311-312/
	313-314/
	315/

---

## Topic E: Questions for PIs Who Are Also Major Users

If you are a PHS-sponsored major user of the SIG instrument listed on page 1, please complete the following items. **If you are not a PHS-sponsored major user of the instrument, go to question 8 on page 15.**

1. In general, how would you rate your ability to gain access to the SIG instrument in 1993?

Always able to gain access ..... 1 316/  
 Usually able to gain access ..... 2  
 Sometimes able to gain access ..... 3  
 Usually unable to gain access ..... 4  
 Always unable to gain access ..... 5

Please explain reason(s) if you are usually or always **unable** to gain access:

\_\_\_\_\_ 317-318/

\_\_\_\_\_ 319-320/

\_\_\_\_\_

2. Please list the PHS-sponsored research grant number(s) that supported the research for which you used the SIG instrument in 1993. Also rate the importance of the SIG instrument in this research. Use additional sheets, as needed.

PHS Research Grant No.	Essential	Somewhat Important	Peripheral	
Ex: 3R01CA00900	1	2	3	
1. <small>321-340/</small>	1	2	3	<small>341/</small>
2. <small>342-361/</small>	1	2	3	<small>362/</small>
3. <small>363-382/</small>	1	2	3	<small>383/</small>
4. <small>384-403/</small>	1	2	3	<small>404/</small>
Comments:				<small>405-406/ 407-408/</small>

3. Please list the PHS grant application number(s) for any of your pending PHS-sponsored research application(s) that would involve use of the SIG instrument. (If you have not yet received a grant application number, please list the title of the application and the institute to which it was referred.) Also rate the importance of the SIG instrument to the proposed research. Use additional sheets as needed.

PHS Research Grant No.	Essential	Somewhat Important	Peripheral
Ex: 3R01CA00900	1	2	3
1. 409-428/	1	2	3
2. 430-449/	1	2	3
3. 451-470/	1	2	3
4. 472-491/	1	2	3
Comments:			

4. When did you first use the SIG instrument to conduct research, including the development of instrument use techniques and methods? (Training staff to conduct research using the SIG instrument qualifies as instrument use, but general student training does not.)

\_\_\_\_ Month \_\_\_\_ Year  
 497-498/ 499-500/

5. Please rate the **current** technological status of the SIG instrument, including any modifications, e.g., alterations or upgrades. The rating should be from the perspective of your specific area of biomedical research.

Yes or No

State-of-the-art in your area? ..... 1 2 501/  
 Adequate to meet your research needs? ..... 1 2 502/

If not adequate, please give your area of research, and explain:

\_\_\_\_\_  
 503-505/  
 \_\_\_\_\_  
 506-507/  
 \_\_\_\_\_  
 508-509/



6. Has your use of the SIG instrument changed since you first used it? (Circle the appropriate number.)

Increased greatly ..... 1 510/  
 Increased somewhat ..... 2  
 No change ..... 3  
 Decreased somewhat ..... 4  
 Decreased greatly ..... 5

Comments:

\_\_\_\_\_ 511-512/  
 \_\_\_\_\_  
 \_\_\_\_\_ 513-514/  
 \_\_\_\_\_

7. Considering your entire usage of the SIG instrument, how great an impact has it had on your PHS research in each of the following areas? (Circle the appropriate number.)

	Very Significant Impact		Significant Impact		No Impact	
	1	2	3	4	5	
Ability to conduct research that could not be done previously						515/
Publications						516/
Ability to gain research funds						517/
Ability to recruit and retain investigators						518/
Collaboration						519/

8. Please describe any other effects of the SIG instrument on your research, laboratory, department, institution or local biomedical research community. (Local biomedical research community is defined as the collection of local area biomedical investigators who are at least partially involved, or interested in, PHS-sponsored biomedical research.)

\_\_\_\_\_ 520-521/  
 \_\_\_\_\_ 522-523/  
 \_\_\_\_\_ 524-525/

Thank you for participating in this study. Please place the questionnaire in the enclosed envelope and return it to: Shared Instrumentation Grant Study, Abt Associates Inc., 55 Wheeler Street, Cambridge, MA 02138